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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/614,033 | 07/08/2003 | Hirohito Watanabe | 239929US3 | 6638 |
| 22850 | 7590 | 08/20/2004 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | KANG, JULIANA K | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2874 | |

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/614,033 | Applicant(s) WATANABE ET AL. | |
| | Examiner Juliana K. Kang | Art Unit 2874 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/8/03</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Inventorship

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 2 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoffart et al (U.S. Patent 5,796,905).

Regarding claim 1, Hoffart et al disclose an optical fiber cable comprising: an optical fiber core (10); a colored layer (4, see column 3 line 55-58); and a plurality of colored rings (3) disposed intermittently in the longitudinal direction of the optical fiber core in between the optical fiber and the colored layer.

Regarding claim 2, Hoffart et al disclose the thickness of the distinctive layer being 0.5-5 μ m (see column 2 lines 66-67) and the thickness of the colored layer of 1-10 μ m (see column 2 line 40).

Regarding claim 11, the recitation that an optical fiber cable including many distinctive optical fibers has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim following the preamble is self-contained description of the structure not depending for completeness upon the introductory clause.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 3-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Hoffart et al (U.S. Patent 5,796,905) and in view of Stocklein et al (U.S. Patent 6,278,828 B1).

Regarding claims 3, 4, 8, and 9, as describe above Hoffart et al disclose the claimed invention except the length and the interval of the distinctive layer (color rings). Stocklein et al teach an optical fiber having color rings that have the length of 1-10mm and the interval of at least 25mm (see column 7 lines 10-15). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the configuration of Stocklein et al in Hoffart et al to provide the optimum marking along an optical fiber.

Regarding claims 5 and 7, it appears that the occupied ratio of the total length of the distinctive layers to the length of the distinctive optical fiber core shown in Fig. 1 of Hoffart et al is less than 20% and Hoffart et al's configuration teaches less than 20%.

7. Claims 1, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (U.S. Patent 5,485,539) and in view of Keplinger et al (U.S. Patent 5,416,875).

Regarding claims 1 and 11, Mills discloses a distinctive optical fiber cable comprising: optical fiber cores (11); a coating (14) over the optical fiber cores; and a plurality of distinctive layers (13), which are composed of ink, disposed intermittently in the longitudinal direction of the optical fiber core in between the optical fiber core and the coating. However, Mills teaches that the coating is a transparent coating and does not teach that the coating is colored layer.

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Keplinger et al teach a colored transparent material used for coating an optical fiber cable. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use transparent colored layer in Mills as taught by Keplinger et al to provide additional color identification.

Regarding claim 7, it appears that the occupied ratio of the total length of the distinctive layers to the length of the distinctive optical fiber core shown in Fig. 8 is less than 20%.

8. Claims 2, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (U.S. Patent 5,485,539) and Keplinger et al (U.S. Patent 5,416,875) as applied to claim 1 above and further in view of Fort (U.S. Patent 6,292,613 B1).

As described above, Mills and Keplinger et al teach the claimed invention including the claimed thickness of the distinctive layer and the claimed diameter of the ink drop (see column 3 lines 60-61). However, Mills and Keplinger et al do not teach the thickness of the colored layer that is larger than or equal to 2 μm and smaller than or equal to 10 μm . Fort teaches an optical fiber coated with a colorant layer having the thickness between 3 and 10 μm . Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use small thickness such as 3 and 10 μm for the colored layer in Mills and Keplinger as taught by Fort to provide the purpose of identification while maintaining the waveguide thickness as small as possible.

Conclusion

9. The prior art documents submitted by applicant have been considered and made of record (note the attached copy of form PTO-1449).


10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ma (US 2003/0108311 A1), Reddy et al (U.S. Patent 6,026,207), Harper, Jr. et al (U.S. Patent 6,317,553 B1), Carter et al (U.S. Patent 4,629,285), Thompson (U.S. Patent 6,532,329 B1), Butera (U.S. Patent 5,945,632), and Conrad et al (U.S. Patent 6,731,844 B2) teach a color layer in an optical fiber cable.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-2348. The examiner can normally be reached on Mon. & Fri. 10:00-6:00 and Tue. & Thur. 10:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Juliana Kang
August 18, 2004